

State of California
California Energy Commission
Minutes of the May 17, 2016, Energy Commission Business Meeting

The meeting was called to order by Chair Weisenmiller. The Pledge of Allegiance was led by Chair Weisenmiller.

Present:

Robert B. Weisenmiller, Chair
Karen Douglas, Commissioner

J. Andrew McAllister, Commissioner
Janea A. Scott, Commissioner

The Chair announced that Item 6 has been held.

The Commission honored Mark Hutchison with a resolution celebrating his career and contributions to the California Energy Commission.

1. CONSENT CALENDAR. (Items on the Consent Calendar will be taken up and voted on as a group. A commissioner may request that an item be moved and discussed later in the meeting.)
 - a. CALIFORNIA HIGH SPEED RAIL AUTHORITY. Proposed resolution approving MOU-15-005 between the California Energy Commission and the California High Speed Rail Authority to help achieve the state's energy policy goals by increasing collaboration and information exchange related to expanding the use of renewable energy, zero net energy buildings, and zero emission vehicles in California. Contact: Sara Kim.
 - b. CALIFORNIA PUBLIC UTILITIES COMMISSION. Proposed resolution approving Agreement MOU-15-007 with the California Public Utilities Commission for an Interagency Information Sharing and Confidentiality Agreement at zero cost to either party. The Parties are entering into this Agreement to comply with CPUC General Order No. 167 and ensure the nondisclosure of any inspection, investigation, or enforcement-related Confidential Information shared between the parties. Contact: Christine Root.
 - c. CITIZENS OVERSIGHT BOARD. Proposed resolution approving MOU-15-004 between the California Energy Commission and Citizens Oversight Board. This memorandum of understanding is to affirm that the California Energy Commission will provide operational and administrative services to the Citizens Oversight Board to the extent feasible and allowed by law. This memorandum of understanding also details the Energy Commission's responsibility to hold and administer the funds for the Citizens Oversight Board with the Board maintaining discretion in how those funds are spent, including entering into and approving agreements with third parties. Contact: Mark Hutchison.
 - d. MODOC JOINT UNIFIED SCHOOL DISTRICT. Proposed resolution approving Amendment 1 to Grant GEO-14-002 with Modoc Joint Unified School District to reallocate direct labor and indirect overhead category budget amounts to the materials and miscellaneous budget category for two additional construction subcontractors. This change is consistent with industry practices for drilling and construction subcontract bidding and billing. Contact: Cheryl Closson.

- e. FELDERSTEIN FITZGERALD WILLOUGHBY & PASCUZZI LLP. Proposed resolution directing the Chief Counsel to enter into a legal services agreement with the law firm of Felderstein Fitzgerald Willoughby & Pascuzzi LLP. The purpose of the agreement is to provide legal advice and representation in the matter of *Energy Commission v. SoloPower, Inc. and SPower, LLC* (Sacramento County Superior Court Case No. 34-2013-00154569-CU-BC-GDS). The Office of Attorney General authorized the Energy Commission to retain outside counsel in this matter. (CEBFP RLF funding) Contact: Michael Doughton.

Commissioner Douglas moved and Commissioner Scott seconded approval of Item 1a-e. The vote was 4-0.

2. ENERGY COMMISSION COMMITTEE APPOINTMENTS. Possible approval of appointments to the Energy Commission's Standing Committees and Siting Case Committees. Contact: Kevin Barker. (5 minutes)

Item 2 was held. No action taken.

3. MISSION ROCK ENERGY CENTER Project (15-AFC-02). Contact: Mike Monasmith. (Staff presentation: 5 minutes)
 - a. Possible approval of proposed order to accept the Executive Director's revised data adequacy recommendation for the Mission Rock Energy Center project, which staff has determined to be data adequate following the Applicant's filing of a supplement to the application for certification (AFC). The project would be a natural gas-fired, nominal 255-megawatt electrical generating facility consisting of 5 simple-cycle turbine generators. Twenty onsite battery units would provide storage of 100 MW hours (or 25 MWs for 4 hours). Synchronous condenser clutch technology would provide ancillary and grid reliability services. The project includes 6.6 miles of 230-kilovolt transmission lines to connect with Southern California Edison's Santa Clara Substation. Mission Rock would be constructed on a 10-acre site, approximately 2 miles west of the city of Santa Paula, in unincorporated Ventura County, California.
 - b. Possible approval of a proposed order appointing a Siting Committee for the Mission Rock Energy Center project.

Commissioner Douglas moved and Commissioner Scott seconded approval of Item 3a. The vote was 4-0. Commissioner McAllister moved and Commissioner Scott seconded approval of Item 3b. The vote was 4-0. Chair Weisenmiller announced Commissioner Douglas will be the Presiding Member and Commissioner Scott will be the Associate Member.

4. SONORAN ENERGY PROJECT (Licensed as Blythe Energy Project Phase II) (02-AFC-01C). Possible approval of an order granting the petition to extend the start of construction deadline for an additional 18 months, from December 14, 2016 to June 14, 2018. Contact: Mary Dyas. (Staff presentation: 5 minutes)

Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 4. The vote was 4-0.

5. RUSSELL CITY ENERGY CENTER (01-AFC-07C). Proposed order granting the petition to amend the California Energy Commission Decision. The proposed changes would revise Visual Resources condition of certification VIS-10 approving a revised offsite visual enhancement plan consisting of painting select offsite buildings and landscaping on a city of Hayward owned parcel. Contact: Jonathan Fong. (Staff presentation: 5 minutes)

Commissioner Douglas moved and Commissioner Scott seconded approval of Item 5. The vote was 4-0.

6. ~~HIGH DESERT POWER PLANT (97-AFC-01C). Contact: Susan Cochran. (Staff presentation: 5 minutes)~~
- a. ~~Possible approval of the Committee Recommended Decision Granting Interim Relief to Drought-Proof the Facility (CRD), and related adoption order, granting interim water supply (drought) relief to the High Desert Power Plant, 97-AFC-01C, located near the City of Victorville in San Bernardino County, by authorizing a one-year extension on the use of groundwater (until September 30, 2017) and requiring other actions to improve the project's ability to store water.~~
 - b. ~~Possible closed session deliberation on the above described CRD. (Government Code section 11126(e)(3).)~~

Item 6 was held. No action taken.

7. POWER SOURCE DISCLOSURE PROGRAM IMPLEMENTATION RULEMAKING (14-OIR-01). Possible approval of a resolution adopting proposed modifications to existing regulations governing the Power Source Disclosure Program and a finding that the proposed regulations are exempt from the California Environmental Quality Act. The modifications implement statutory changes enacted in 2009 and 2013 and update terms and definitions to bring the regulations in line with contemporary usage of terms. Contact: Kevin Chou. (Staff presentation: 10 minutes)

Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 7. The vote was 4-0.

8. CONSOL HOME ENERGY EFFICIENCY RATING SERVICES, INC. Proposed resolution approving (1) certification of ConSol Home Energy Efficiency Rating Services, Inc., (CHEERS) as a Home Energy Rating System (HERS) provider to oversee HERS raters conducting Field Verification and Diagnostic Testing to show compliance with the 2013 Building Energy Efficiency Standards for Prescriptive Residential HVAC Alterations and (2) the CHEERS HERS Data Registry as a residential data registry. Contact: Suzie Chan. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 8. The vote was 4-0.

9. CALIFORNIA EMPLOYMENT TRAINING PANEL. Proposed resolution approving Agreement 600-15-012 for a \$2,000,000 Interagency Agreement with the California Employment Training Panel (ETP). This agreement will continue to support specialized training across multiple fuel and advanced vehicle technologies platforms, serving California's clean alternative fuels industry. (ARFTVP funding) Contact: David Nichols. (Staff presentation: 5 minutes)

Commissioner Scott moved and Commissioner Douglas seconded approval of Item 9. The vote was 4-0.

10. BENICIA UNIFIED SCHOOL DISTRICT. Proposed resolution approving Agreement 007-15-ECG with Benicia Unified School District for a \$3,000,000 loan at zero percent interest to install a 721.35 kW DC photovoltaic (PV) parking canopy mounted system. The PV system is estimated to generate 1,009,210 kWh of electricity annually, reducing 348 tons of greenhouse gas emissions, and saving the district approximately \$200,630 annually in utility costs. Simple payback on the loan amount is 15 years. (ECAA-Ed funding) Contact: Barry McLeod. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 10. The vote was 4-0.

11. CITY OF BALDWIN PARK. Proposed resolution approving Agreement 009-15-ECD with the City of Baldwin Park for a \$2,988,974 loan at one percent interest to implement energy efficiency upgrades and install solar PV panels at city-owned facilities. The project is estimated to save 1,713,535 kWh of electricity and 7,779 therms of natural gas annually, reducing 636 tons of greenhouse gas emissions, and saving the city approximately \$175,822 in utility cost. Total project cost is estimated to be \$3,089,257 and qualifies for \$30,000 in utility incentives. Simple payback on the loan amount is 17 years. (ECAA funding) Contact: Amir Ehyai. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 11. The vote was 4-0.

12. OXNARD HARBOR DISTRICT. Proposed resolution approving Agreement 010-15-ECD with Oxnard Harbor District (Harbor District) for a \$501,724 loan at one percent interest to retrofit 205 high mast (100') 1000 watt high pressure sodium fixtures with 283 watt LEDs at the Port of Hueneme. The project is estimated to save 162,020 kWh of electricity annually and reduce the Harbor District's yearly utility expense by \$41,723. The project will be fully funded by the Energy Commission loan. The simple payback on the loan amount is 12 years. (ECAA funding) Contact: Anne Fisher. (Staff Presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 12. The vote was 4-0.

13. ADM ASSOCIATES, INC. Proposed resolution approving Agreement 300-15-011 with ADM Associates, Inc. for a \$12,990,063 contract to (1) develop a methodology to conduct a survey of the energy-using characteristics of commercial utility customers that will serve as a baseline and support the Energy Commission's work on the demand forecast, (2) implement the survey, and (3) provide an unbiased, comprehensive analysis of the data for more geographically disaggregated forecasts. The Commercial End-Use Survey (CEUS) will facilitate the commercial success and market adoption of technologies, strategies, and other innovations. Of the total contract budget, \$7,990,063 will be funded from the EPIC Program, and is immediately available. The total budget includes up to an additional \$5,000,000 contingent upon other non-EPIC funding becoming available. (EPIC and other funding) Contact: Sabaratnam Thamilsaran. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 13. The vote was 4-0.

(Commissioner McAllister disclosed that his wife is a professor at UC Davis King Hall and that UC Davis is a part of Item 14, Item 15a-b, Item 16c, Item 16e, Item 16g and Item 20a.)

14. ENERGETICS INCORPORATED. Proposed resolution approving Agreement 300-15-010 with Energetics Incorporated for a \$648,716 contract to produce a research roadmap that will strategically frame the project priorities, partnerships and milestones that EPIC can use to accelerate RD&D progress in meeting the critical needs and expectations of utilities, ratepayers and customers in the industrial, agricultural and water (IAW) sectors. (EPIC funding) Contact: Molly O'Hagan. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 14. The vote was 4-0.

15. REDUCING COSTS FOR COMMUNITIES AND BUSINESSES THROUGH INTEGRATED DEMAND-SIDE MANAGEMENT AND ZERO NET ENERGY DEMONSTRATIONS, GFO-15-308. This solicitation sought proposals to fund

integrated technologies, strategies, and demonstrations that emphasize innovative energy efficiency packages to achieve whole building performance improvements that help overcome technical, economic, and other market barriers that prevent achievement of state policy goals. (EPIC funding) Contact: Dustin Davis. (Staff presentation: 10 minutes)

- a. CALIFORNIA HOMEBUILDING FOUNDATION.
 - i. CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS. Proposed resolution finding that based on the lead agency City of Chino's Final Environmental Impact Report (FEIR), mitigation monitoring plan, statement of overriding considerations, resolution adopting the FEIR, and the city's addendum to the FEIR and resolution, the work under the proposed project presents no new significant or substantially more severe environmental impacts beyond those already considered.
 - ii. Proposed resolution approving Agreement EPC-15-042 with California Homebuilding Foundation for a \$4,819,805 grant to fund a community-scale demonstration of cost-effective Zero Net Energy construction for a subdivision of single-family homes. The project will identify, develop and demonstrate cost effective ZNE designs. The project will evaluate actual energy savings, costs, behavioral aspects, and indoor air quality in these homes. The demonstration will be in the City of Chino.
- b. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement EPC-15-053 with Electric Power Research Institute, Inc. for a \$3,894,721 grant to develop and demonstrate an innovative approach for energy efficiency retrofits in multi-family buildings in disadvantaged communities that uses a customer-centric instead of a technology-centric approach. The project locations are Central and Southern California.
- c. PROSPECT SILICON VALLEY. Proposed resolution approving Agreement EPC-15-064 with Prospect Silicon Valley for a \$2,995,653 grant to fund the demonstration of a ZNE retrofit to a low-income, multi-unit, mixed-use building using energy efficiency upgrade packages that can be replicable under the challenging conditions typical of small-medium commercial and residential building sectors. The project location is San Francisco.

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 15a-c. The vote was 4-0.

16. REDUCE THE ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS OF ELECTRICITY GENERATION AND MAKE THE ELECTRICITY SYSTEM LESS VULNERABLE TO CLIMATE IMPACTS: PHASE II, GFO-15-309. This solicitation sought proposals for research and development projects that either (1) improve indoor air quality while advancing the next generation end-use energy efficiency technologies and strategies for the building sector or (2) reduce the environmental and public health impacts of electricity generation and make the electricity system less vulnerable to climate impacts. (EPIC funding) Contact: Sonya Ziaja. (Staff presentation: 10 minutes)
 - a. SAN DIEGO ZOO GLOBAL. Proposed resolution approving Agreement EPC-15-040 with Zoological Society of San Diego dba San Diego Zoo Global for a \$598,671 grant to study and evaluate effective mitigation strategies when renewable energy-generating facilities are built in burrowing owl habitats. Transmitters attached to owls will track their movement and habitat preferences, which can inform how and where to best relocate owls displaced by energy developments.

- b. ANTELOPE VALLEY WATER STORAGE, LLC. Proposed resolution approving Agreement EPC-15-049 with Antelope Valley Water Storage, LLC for a \$197,300 grant to conduct a feasibility study that will determine the value of energy storage and optimize associated grid support benefits provided by Peak Hour Pumped Storage and Aquifer Pumped Hydro applications at an existing water bank.
- c. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement EPC-15-060 with the Regents of the University of California, on behalf of the Davis campus, for a \$597,865 grant to determine how solar energy facilities influence microhabitat conditions that affect rare plants, invasive plants, and species interactions.
- d. UNIVERSITY OF CALIFORNIA, IRVINE. Proposed resolution approving Agreement EPC-15-062 with the Regents of the University of California, on behalf of the Irvine campus' Advanced Power and Energy Program, for a \$200,000 grant to demonstrate (1) viability of low cost solid state sensors to provide reliable real time long term monitoring of emissions performance of distributed generation devices and (2) use of the sensor as integrated into the distributed generation control system to maintain emissions performance.
- e. DOE-LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-15-068 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$200,000 grant to evaluate the impacts of climate change on wind energy investment in California using "state-of-the-science" high-resolution climate models.
- f. ALTOSTRATUS, INC. Proposed resolution approving Agreement EPC-15-070 with Altostratus, Inc. for a \$193,326 grant to fund the development of fine-resolution characterization of intra-urban climate variability and transfer functions to enhance the probabilistic and short-term climate forecasts for the electric system.
- g. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement EPC-15-072 with the Regents of University of California, on behalf of the Davis campus, for a \$200,000 grant to utilize computational chemistry to optimize a naturally-occurring organic molecule that captures carbon dioxide from power plant stacks and other large emitters.
- h. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement EPC-15-078 with the Regents of the University of California, on behalf of the Berkeley campus, for a \$350,000 grant to provide policy makers with a systematic approach to assess and optimize climate change adaptation strategies for California's electricity system by (1) surveying public understanding on the subject of climate change adaptation, (2) addressing new technological and operational risks from climate change, (3) quantifying risk minimization practices, and (4) evaluating resilience of the electricity sector against extreme events.
- i. THALASSA RESEARCH & CONSULTING, LLC. Proposed resolution approving Agreement EPC-15-080 with Thalassa Research & Consulting, LLC for a \$128,188 grant to apply a framework for assessing the long-distance climate change impacts and linkages that can disrupt electricity services and cause cascading effects on critical infrastructure in the Los Angeles region. The results will be integrated into local climate vulnerability assessments and adaptation planning.

- j. GHOULEM RESEARCH. Proposed resolution approving Agreement EPC-15-081 with Ghoulem Research for a \$400,000 grant to analyze histories of selected energy technology changes with respect to their implications for planning future technological transitions toward a low-carbon electricity sector and develop a flexible household-level air conditioning demand simulation modeling system to offer improved behavioral specificity in the context of electricity sector transitions.
- k. UNIVERSITY OF CALIFORNIA, MERCED. Proposed resolution approving Agreement EPC-15-082 with the Regents of the University of California, on behalf of the Merced campus, for a \$200,000 grant to demonstrate operation of a microplasma array reactor that will lead to an efficient, electricity-based technique to convert a mixture of carbon dioxide and methane to hydrogen, in order to simulate biogas. The final goal of this agreement is to develop an electricity-based technology that provides a potentially renewable source of hydrogen for use in electricity generation. If successful, this technology could be adapted to use other gas inputs in the creation of hydrogen, such as products from the gasification of biomass.

Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 16a-k. The vote was 4-0.

- 17. ADVANCING SOLUTIONS THAT ALLOW CUSTOMERS TO MANAGE THEIR ENERGY DEMAND, GFO-15-311. This solicitation sought proposals to fund applied research and development projects that develop new technologies and applications that enable cost-beneficial customer-side-of-the-meter energy choices. Projects were pursued in four areas: supply-side resources, demand-side resources, transactive demand response signals, and the value proposition for non-residential building lighting retrofits. (EPIC funding) Contact: David Hungerford. (Staff presentation: 10 minutes)
 - a. UNIVERSAL DEVICES, INC. Proposed resolution approving Agreement EPC-15-054 with Universal Devices, Inc. for a \$3,187,370 grant to develop and pilot-test a Retail Automated Transactive Energy System (RATES) that uses behind-the-meter energy management solutions. The goal is to minimize the cost and complexity of customer participation in demand response programs, while maximizing the potential participation of large numbers of small loads that can improve system load factor, shave peaks, integrate renewable generation and provide low opportunity-cost resources to the grid.
 - b. ELECTRIC POWER RESEARCH INSTITUTE (EPRI). Proposed resolution approving Agreement EPC-15-075 with Electric Power Research Institute for a \$3,998,587 grant to fund assessment of transactive tariff effectiveness to influence aggregated demand side resources and consumer behavior to provide grid stability, reliability, and greenhouse gas reductions.
 - c. BMW OF NORTH AMERICA, LLC. Proposed resolution approving Agreement EPC-15-084 with BMW of North America, LLC for a \$3,999,900 grant to utilize real-time vehicle information, predictive travel behavior, grid location data, and energy market price data to manage a vehicle's charging.
 - d. ALTERNATIVE ENERGY SYSTEMS CONSULTING, INC. Proposed resolution approving Agreement EPC-15-048 with Alternative Energy Systems Consulting, Inc. for a \$3,996,560 grant to test and validate an intelligent software solution that continuously learns, adapts, and manages residential energy usage to provide a scalable solution that maximizes value to the utilities, solar providers, and end-users.

- e. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement EPC-15-057 with the Regents of the University of California, on behalf of the California Institute for Energy and Environment at the Berkeley campus, for a \$4,000,000 grant to improve small and large commercial customer participation in demand response by providing a cost-effective energy management system that allows a wide range of hardware and service offerings and automated price-based management.
- f. UNIVERSITY OF CALIFORNIA, LOS ANGELES. Proposed resolution approving Agreement EPC-15-073 with the Regents of the University of California, on behalf of the Los Angeles campus, for a \$2,007,875 grant to assess and demonstrate alternative demand response strategies that will increase residential customer participation in future demand response programs offered by California's Investor-Owned Utilities.
- g. CENTER FOR SUSTAINABLE ENERGY. Proposed resolution approving Agreement EPC-15-074 with Center for Sustainable Energy for a \$3,960,805 grant to develop co-optimization strategies for distributed energy resources to maximize customer and system value under existing and future retail and wholesale tariff structures, and transactive energy pricing signals.
- h. OHMCONNECT, INC. Proposed resolution approving Agreement EPC-15-083 with Ohmconnect, Inc. for a \$3,995,028 grant to develop and conduct experiments evaluating methods of encouraging proactive consumer participation in demand response programs. The project will develop, test, and refine information communication and automation techniques that maximize customer engagement in demand response events and low-cost telemetry solutions that facilitate participation in California Independent System Operator markets.
- i. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement EPC-15-045 with Electric Power Research Institute, Inc. for a \$498,054 grant to design, develop, test, and implement a system to create and communicate transactive signals that can be used to facilitate demand response provided by California utility customers and other recipients. The signals will be integrated with the other demand response projects awarded under this solicitation.
- j. DOE-LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-15-051 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$500,000 grant to identify, quantify and evaluate the costs and benefits of implementing demand response lighting controls as described in the California Energy Code across California's existing, non-residential building stock.

Commissioner McAllister disclosed that his former employer Center for Sustainable Energy is a subcontractor and he would recuse himself from Item 17d and 17g. Commissioner Scott moved and Commissioner McAllister seconded the approval of Item 17a-c, Item 17e-f and 17h-j. The vote was 4-0. Commissioner McAllister left the room on Item 17d and 17g. Commissioner Douglas moved and Commissioner Scott seconded approval of Item 17d and 17g. The vote was 3-0.

- 18. THE EPIC CHALLENGE: ACCELERATING THE DEPLOYMENT OF ADVANCED ENERGY COMMUNITIES, GFO-15-312. This solicitation sought proposals to fund a competition that will challenge project teams comprised of building developers, local governments, technology developers, researchers, utilities, and other project partners to develop innovative and replicable approaches for accelerating the deployment of Advanced Energy Communities in IOU service territories. (EPIC funding) Contact: Anthony Ng. (Staff presentation: 10 minutes)

- a. ZIPPOWER, LLC. Proposed resolution approving Agreement EPC-15-052 with ZipPower, LLC for a \$1,495,338 grant to develop and pilot a platform that optimizes distributed energy resource planning by integrating and automating all the data required to target optimal sites across city areas and streamline pre-approval of the permitting and interconnection at those sites. The proposed solution optimizes local energy resources and their value as a citywide program, using a technical platform along with aggregated customer financing to integrate and automate all the data and functionality required to design, finance, deploy, scale, and replicate Advanced Energy Communities.
- b. CHARGE BLISS, INC. Proposed resolution approving Agreement EPC-15-055 with Charge Bliss, Inc. for a \$1,500,000 grant to design a replicable Advanced Energy Community that balances over three megawatts of photovoltaic generation with an electric vehicle charging network of at least 100 charging stations and stationary battery storage. This project will conduct planning, permitting, financial modeling and engineering design to bring this Advanced Energy Community to a shovel-ready state for a test site in the Los Angeles region.
- c. CLEAN COALITION. Proposed resolution approving Agreement EPC-15-056 with Natural Capitalism Solutions, dba Clean Coalition for a \$1,318,997 grant to accelerate the planning, approval, and deployment of an Advanced Energy Community, including a planned and designed Solar Emergency Microgrid, within a diverse community in the southern portion of San Mateo County.
- d. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement EPC-15-058 with the Regents of the University of California, on behalf of the Berkeley campus, for a \$1,500,000 grant to develop and design a block-scale retrofit plan combining deep energy efficiency retrofit strategies, integrated distributed energy generation systems, and water conservation and capture systems in a low-to-middle income neighborhood in the City of Oakland. The development of this plan will also inform innovative ways to further plan, permit, and finance similar Advanced Energy Community developments.
- e. UNIVERSITY OF CALIFORNIA, LOS ANGELES. Proposed resolution approving Agreement EPC-15-061 with the Regents of the University of California, on behalf of the Los Angeles campus, for a \$1,497,996 grant to fund the creation of an Advanced Energy Community design for disadvantaged communities in Claremont, California, using meter-level energy demand data to conduct evidence-based analyses, and establishing community infrastructure efforts to reach homeowners and renters in disadvantaged communities.
- f. CITY OF BERKELEY. Proposed resolution approving Agreement EPC-15-065 with the City of Berkeley for a \$1,499,214 grant to design, plan and facilitate the permitting of a Clean Energy Microgrid Community (CEMC) that incorporates advanced energy efficiency technologies and will be operated to aggregate and share clean energy resources across several facilities, including facilities whose function is critical in the event of a disaster. This project will develop a regulatory plan, technical plan, business & financial model, procurement plan, and cost/benefit analysis that will ultimately become a Master Community Design of a Downtown Berkeley CEMC Pilot Project.
- g. GROUNDWORK SAN DIEGO-CHOLLAS CREEK. Proposed resolution approving Agreement EPC-15-066 with Groundwork San Diego-Chollas Creek for a \$1,500,000 grant to fund development of a prototype plan called the Encanto Social-Economic Education Development (EnSEED), designed to transform an existing disadvantaged community in Southeastern San Diego into a community

of near zero net energy buildings. This project will include close engagement of the local community, development of a final system design, financing plan, and a plan to obtain all required government review and approvals.

- h. LOCAL GOVERNMENT COMMISSION. Proposed resolution approving Agreement EPC-15-067 with Local Government Commission for a \$1,500,000 grant to pilot a new process for local governments and developers to identify and secure financing for a suite of projects that will comprise an Advanced Energy Community. This new process will be developed using Fresno's Blackstone Corridor and Downtown Specific Plan as a pilot location.
- i. ZERO NET ENERGY ALLIANCE. Proposed resolution approving Agreement EPC-15-069 with Zero Net Energy (ZNE) Alliance for a \$1,469,779 grant to develop innovative business models and policy frameworks that overcome adoption barriers for ZNE residential communities and community distributed energy resources in the City of Lancaster. This project will provide tools and training for other local governments, project developers, home builders, utilities, and other stakeholders on how to use the project's technical and financial models to advance ZNE and distributed energy resource projects.
- j. BIODICO, INC. Proposed resolution approving Agreement EPC-15-071 with Biodico, Inc. for a \$1,175,919 grant to develop and pilot a Project Management Application tool for farms and agricultural communities that streamlines the permitting, financing and interconnection of multiple distributed energy resources. This tool will be developed and tested in collaboration with four local jurisdictions in the Central Valley, the San Joaquin Valley Air Pollution Control District and the US Navy.
- k. ZERO NET ENERGY ALLIANCE. Proposed resolution approving Agreement EPC-15-076 with Zero Net Energy Alliance for a \$1,480,111 grant to facilitate adoption of a comprehensive integrated policy, planning, and financing framework to transform the City of Richmond into a ZNE Community. As part of the project, ZNE Alliance will also facilitate the planning and permitting of approximately 20 abandoned homes to be converted into affordable ZNE homes.
- l. UNIVERSITY OF CALIFORNIA, IRVINE. Proposed resolution approving Agreement EPC-15-077 with the Regents of the University of California, on behalf of the Irvine campus' Advanced Power and Energy Program, for a \$1,500,000 grant to plan and design a specific and generic Advanced Energy Community (AEC). Specifically, this project will develop extensible tools, plan, and design the integrated set of energy infrastructure and advanced energy technology approaches to convert the disadvantaged community of Oak View into an AEC and to provide a template for converting other communities through a general master community design. The project team will collaborate with the City of Huntington Beach and stakeholders to evaluate case studies for energy technologies and business and financial models, as well as develop outreach tools.

Commissioner McAllister disclosed that his former employer Center for Sustainable Energy is a subcontractor and he would recuse himself from Item 18f. Commissioner McAllister moved and Commissioner Scott seconded approval of Item 18a-e and Item 18g-l. The vote was 4-0. Commissioner McAllister left the room for Item 18f. Commissioner Scott moved and Commissioner Douglas seconded approval of Item 18f. The vote was 3-0.

- 19. DEVELOPING THE SMART GRID OF 2020: CLEAN, SAFE, AND HIGHLY INTELLIGENT, GFO-15-313. This solicitation sought proposals to develop technologies, tools, and strategies to enable the smart grid of 2020. Projects were pursued in two areas: smart grid operation and management practices and distribution automation

enhancements. (EPIC funding) Contact: Consuelo Sichon. (Staff presentation: 10 minutes)

- a. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement EPC-15-044 with Electric Power Research Institute, Inc. for a \$816,539 grant to develop and demonstrate open-source communication software for distributed energy resources, and to develop certification test procedures for interconnection compliance.
- b. SIEMENS CORPORATION. Proposed resolution approving Agreement EPC-15-046 with Siemens Corporation for a \$500,000 grant to develop an operational dashboard for electrical distribution substations. This dashboard display would show the current grid state, display warnings for detected problems, and automatically suggest potential solutions to reduce the duration of power outages.
- c. DOE-SLAC NATIONAL ACCELERATOR LABORATORY. Proposed resolution approving Agreement EPC-15-047 with the Department of Energy's SLAC National Accelerator Laboratory (operated by Stanford University) for a \$2,210,720 grant to further develop Powernet, a cloud-based method to manage energy resources in homes and businesses. This project includes a pilot test of Powernet to automatically control and coordinate distributed energy resources behind the meter for residential ratepayers.
- d. ONSET, INC. Proposed resolution approving Agreement EPC-15-059 with Onset, Inc. for a \$638,993 grant to develop grid control software that disaggregates the large problem of integrating renewables under centralized control into smaller, more manageable clusters that can be controlled at the generator level as opposed to the grid level.

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 19a-d. The vote was 4-0.

20. ADVANCING WATER AND ENERGY EFFICIENT STRATEGIES AND TECHNOLOGIES IN CALIFORNIA, GFO-15-317. This solicitation sought proposals to: (1) conduct research to identify, test, evaluate and demonstrate innovative technologies and strategies that will result in both water and energy savings and will overcome barriers to large scale deployment; (2) develop innovative and replicable approaches for accelerating the deployment of drought resilient strategies that minimize need for new water related energy infrastructure. (EPIC funding) Contact: Kevin Mori. (Staff presentation: 10 minutes)

- a. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement EPC-15-050 with the Regents of the University of California, on behalf of the Davis campus, for a \$1,989,201 grant to demonstrate technologies to achieve water and energy savings in the wine processing sector. Technologies include a heat exchanger that reduces the energy requirements for processing white wine and a water treatment technology that enables indoor reuse of recycled winery water.
- b. VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY. Proposed resolution approving Agreement EPC-15-079 with Victor Valley Wastewater Reclamation Authority (VWRA) for a \$1,734,059 grant to demonstrate an advanced, pre-commercial flow battery storage and control system at VWRA's facility in Victorville, California that will improve efficiency, reduce the price of recycled water and increase its availability.

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 20a-b. The vote was 4-0.

21. **Minutes:** Possible approval of the April 13, 2016 Business Meeting Minutes.

Commissioner Scott moved and Commissioner McAllister seconded approval of Item 21. The vote was 4-0.

22. **Lead Commissioner or Presiding Member Reports.** The Commissioners reporter on their recent activities.

23. **Chief Counsel's Report:** None.

24. **Executive Director's Report.** The Executive Director gave a report.

25. **Public Adviser's Report.** The Public Adviser gave a report.

26. **Public Comment:** Larry McLaughlin from Advanced Transportation & Renewable Energy gave a public comment.

Appearances:

(*by telephone)

*William Ponder, Goundwork San Diego-Chollas Creek

*Sriniras Sukumar, Goundwork San Diego-Chollas Creek

Gregg Wheatland, Ellison Schneider Harris, LLP

Kif Scheuer, Local Government Commission

Nazar Pankiv, Personal Empowerment

Larry McLaughlin, Advanced Transportation & Renewable Energy

Jay Lenzmeier, CHEERS

Mitchell Weinberg, Calpine Corporation

Kristen Castanos, Stoel Rives, LLP

Barbara McBride, Calpine Corporation

Anthony Nahas, UC Berkeley

Craig Lewis, Clean Coalition

Peter Davis, Advanced Transportation & Renewable Energy

Richard Schorske, ZNE Alliance



There being no further business, the meeting was adjourned.

Respectfully submitted,

A handwritten signature in cursive script that reads "Cody Goldthrite".

CODY GOLDTHRITE
Secretariat